NEC

Installation Guide (Windows)

Express5800 Series

NEC ESMPRO ServerAgentService Ver. 1.0

Chapter 1 General Description

Chapter 2 Installation

Chapter 3 Uninstallation

Chapter 4 Appendix

SAS10_E-IG-W-002-01-001
© NEC Corporation 2014

Contents

Contents 2

Notations Used in This Document 4
Notations used in the text 4
Abbreviations of Operating Systems 5

Trademarks 6

Warnings and Additions to This Document 7
Latest editions 7

Chapter 1 General Description 8

1. Introduction 9

2. System Requirements 10

Chapter 2 Installation 11

1. Before Starting Installation 12
1.1 Installation method 12
1.2 Settings before installation 12
1.2.1 Installing of .NET Framework 12
1.2.2 Setting of TCP/IP 14
1.2.3 Installing of SNMP Service 14
1.2.4 Settings of SNMP Service 16
1.2.5 Monitoring of RAID system 18

2. Installation 19
2.1 Service Mode and Non-Service Mode 19
2.1.1 Service Mode 19
2.1.2 Non-Service Mode 19
2.1.3 Comparison of Service Mode and Non-Service Mode 20
2.2 Start of a setup program 21
2.3 Execution of a setup program 22

3. After Finishing Installation 26
3.1 Operations Check 26
3.2 Port Setting 27
3.3 HTTPS Setting 27
3.4 Operations Check 35

Chapter 3 Uninstallation 36

1. Before Starting Uninstallation 37
1.1 Confirmation of .NET Framework 37
1.2 Confirmation of Express Report Service / Express Report Service (HTTPS) 37

2. Uninstallation 38
2.1 On full install OS 38
2.2 On Server Core install OS 40

Chapter 4 Appendix 42

1. Notes 43
1.1 Event log 43
1.2 Hard disk drive / RAID system / File system 49
1.3 I/O device 51
1.4 Coexistence with another product 52
1.5 Report 52

1.6 OS dependence 52
1.7 Others 55

2. Port number list 58

3. Services list 59

4. The order of stop and start of services 60

Notations Used in This Document

Notations used in the text

In addition to safety-related symbols urging caution, 3 other types of notations are used in this document. These notations have the following meanings.

Important	Indicates critical items that must be followed when handling the operating software.
Note	Indicates items that must be confirmed when handling the operating software.
Tips	Indicates information that is helpful to keep in mind.

Abbreviations of Operating Systems

Windows Operating Systems(OS) are referred to as follows.

Notations in this document	Official names of Windows
Windows Server 2012 R2	Windows Server 2012 R2 Standard
	Windows Server 2012 R2 Datacenter
Windows Server 2012	Widnows Server 2012 Standard
	Widnows Server 2012 Datacenter
Windows Server 2008 R2	Windows Server 2008 R2 Standard
	Windows Server 2008 R2 Enterprise
	Windows Server 2008 R2 Datacenter
Windows Server 2008	Windows Server 2008 Standard
	Windows Server 2008 Enterprise
	Windows Server 2008 Datacenter
	Windows Server 2008 Standard 32-bit
	Windows Server 2008 Enterprise 32-bit
	Windows Server 2008 Datacenter 32-bit
Windows 8.1	Windows 8.1 Pro 64-bit Edition
	Windows 8.1 Pro 32-bit Edition
Windows 8	Windows 8 Pro 64-bit Edition
	Windows 8 Pro 32-bit Edition
Windows 7	Windows 7 Professional 64-bit Edition
	Windows 7 Professional 32-bit Edition

Trademarks

EXPRESSCLUSTER and Universal RAID Utility are registered trademarks of NEC Corporation.
Microsoft, Windows, and Windows Server are registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.
Avago, LSI and LSI logo design are registered trademarks or trademarks of Avago Technologies.

All other product, brand, or trade names used in this publication are the trademarks or registered trademarks of their respective trademark owners.

Warnings and Additions to This Document

1. **Unauthorized reproduction of the contents of this document, in part or in its entirety, is prohibited.**
2. **This document is subject to change at any time without notice.**
3. **Do not make copies or alter the document content without permission from NEC Corporation.**
4. **If you have any concerns, or discover errors or omissions in this document, contact your sales representative.**
5. **Regardless of article 4, NEC Corporation assumes no responsibility for effects resulting from your operations.**
6. **The sample values used in this document are not the actual values.**

Keep this document for future reference.

Latest editions

This document was created based on the information available at the time of its creation. The screen images, messages and procedures are subject to change without notice. Substitute as appropriate when content has been modified.

NEC ESMPRO ServerAgentService Ver. 1.0

1 General Description

This chapter explains NEC ESMPRO ServerAgentService.

1. Introduction

2. System Requirements

Describes about the need environment of NEC ESMPRO ServerAgentService.

1. Introduction

Read this document so as to gain an adequate understanding of the contents.
The contents in this document are intended for users who fully understand features and operations of OS related to this utility.
If there is any unclear point, see Windows online help.

Software for monitoring the server. This works with NEC ESMPRO Manager. You can choose Service Mode or Non-Service Mode when installing this software. Service Mode resides as the OS service and Non-Service Mode does not use the OS service to reduce the OS resources such as memory or CPU.

For details of Service Mode and Non-Service Mode, see "Chapter2 2.1 Service Mode and Non-Service Mode".
For details of NEC ESMPRO Manager, see "NEC ESMPRO Manager Installation Guide".

2. System Requirements

NEC ESMPRO ServerAgentService requires the following hardware and software.

- Hardware
  - Machine — Express5800 series
  - Memory — Memory required for running OS + 100MB or more
  - Free hard disk drive space — 50MB or more

- Software
  - OS — Windows Server 2012 R2
    Windows Server 2012
    Windows Server 2008 R2
    Windows Server 2008
    Windows 8.1
    Windows 8
    Windows 7
  - OS component — Simple Network Management Protocol (SNMP)
    .NET Framework 4.5.2
    .NET Framework 4.5.1
    .NET Framework 4.5
    .NET Framework 4.0

Important Monitoring for NEC ESMPRO ServerAgentService by NEC ESMPRO Manager Ver6.00 or later.

Tips

- SNMP Service is not essential function by Non-Service Mode of NEC ESMPRO ServerAgentService. For details of Service Mode and Non-Service Mode, see "Chapter 2. 2.1 Service Mode and Non-Service Mode".
- NEC ESMPRO ServerAgentService cannot use on Windows Server 2008 Server Core or Windows Server 2008 R2 Server Core (Service Pack Non-Application).

NEC ESMPRO ServerAgentService Ver. 1.0

2 Installation

This chapter explains installation of NEC ESMPRO ServerAgentService.

1. Before starting installation

Describes about necessary setting before NEC ESMPRO ServerAgentService installation.

2. Installation

Describes about installation procedure of NEC ESMPRO ServerAgentService.

3. After finishing installation

Describes about necessary setting after NEC ESMPRO ServerAgentService installation.

1. Before Starting Installation

Be sure to read this page before installing NEC ESMPRO ServerAgentService.

1.1 Installation method

NEC ESMPRO ServerAgentService has the following installation method.

♦ Pre-installation

In Windows pre-installed model of Express5800 series, NEC ESMPRO Agent is already installed.

To use follow a procedure of “1.2.4 Settings of SNMP Service”.

♦ Installation simultaneously with OS installation

You can install NEC ESMPRO ServerAgentService automatically when Windows OS is installed with EXPRESSBUILDER.

To use follow a procedure of “1.2.4 Settings of SNMP Service”.

♦ Individual installation

You can execute setup program from EXPRESSBUILDER.

To install NEC ESMPRO Agent, follow a procedure of “1.2 Settings before installation”

1.2 Settings before installation

Install NEC ESMPRO ServerAgentService after some components are set.

1.2.1 Installing of .NET Framework

Installation of .NET Framework 4, .NET Framework 4.5 or later are indispensable by NEC ESMPRO ServerAgentService.

The procedure of "1.2.1 Installing of .NET Framework" is unnecessary by the environment that .NET Framework of the above version is installed. Follow a procedure after "1.2.2 Setting of TCP/IP".

Tips

If uninstall .NET Framework 4 after installation of NEC ESMPRO ServerAgentService, install .NET Framework 4 again. Then uninstall and install NEC ESMPRO ServerAgentService.

♦ Installing of .NET Framework

The installing of .NET Framework is described below.

1. Sign-in (Log on) to the system with the built-in administrator, which has administrative privileges.

2. Insert EXPRESSBUILDER into Optical disk drive.

Tips

If you are installing on Windows 2008 Server R2 (Service Pack 1) on Server Core, you need to install follow the instructions below before you install .NET Framework 4.

- Start /w ocsetup ServerCore-WOW64
- Start /w ocsetup NetFx2-ServerCore
- Start /w ocsetup NetFx2-ServerCore-WOW64

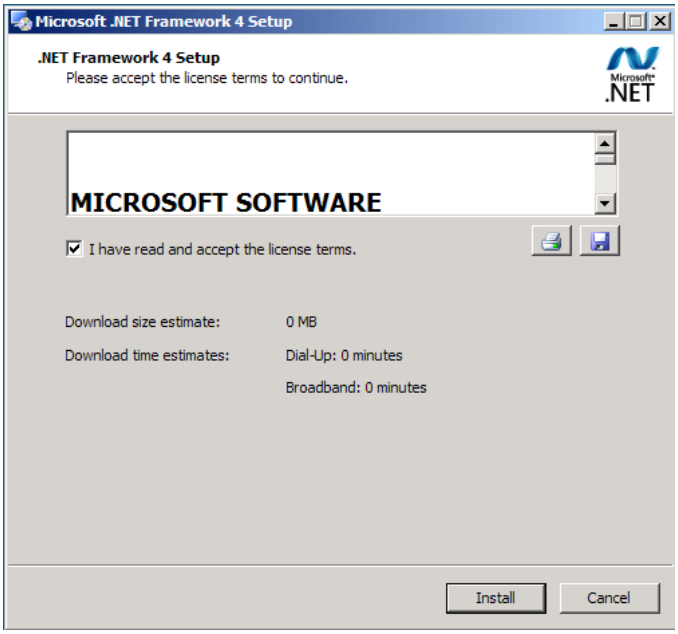
3. Double-click "<Revision>¥win¥dnetfwk¥dotNetFx40_Full_x86_x64.exe".

Tips

On Windows Server 2008 R2 Server Core,
Double-click "<Revision>¥win¥dnetfwk¥dotNetFx40_Full_x86_x64_SC.exe".

4. Check [I have read and accept the license terms.], and click [Insatll].

Start of installation.



5. Click [Finish].

The installation completed.

Restart the system. When installing the first time of .NET Framework.

1.2.2 Setting of TCP/IP

Set a static IP address for the server.

See Help from Windows for how to set TCP/IP.

1.2.3 Installing of SNMP Service

Installation of SNMP Service is indispensable by Service Mode of NEC ESMPRO ServerAgentService.

The installing of SNMP Service is described below.

Tips

- SNMP Service is not essential function by Non-Service Mode of NEC ESMPRO ServerAgentService. For details of Service Mode and Non-Service Mode, see "2.1 Service Mode and Non-Service Mode".
- If uninstall SNMP Service after installation of NEC ESMPRO ServerAgentService, install SNMP Service again. Then uninstall and install NEC ESMPRO ServerAgentService.

♦ Windows Server 2012 / Windows Server 2012R2

1. Click [Programs and Features] in [Control Panel].

2. Click [Turn Windows features on or off].

   “Add Roles and Features Wizard” window appears.

3. Click [Features].

   [Features] but when it cannot be clicked by gray, when [Next] is clicked several times, [Features] can be clicked now.

4. Check [SNMP Service] check box.

5. Click [Next].

6. Click [Install].

   Installing, it becomes more effective, it starts.

7. Click [Close].

Tips

In the case of Windows Server 2012 or later Server Core installation, execute the following commands by the command prompt.

"Dism /online /enable-feature /featurename:SNMP"

♦ Windows Server 2008 / Windows Server 2008 R2

1. Click [Programs and Features] in [Control Panel].

2. Click [Turn Windows features on or off].

   "Server Manager" window appears.

3. Click [Features].

4. Click [Add Features].

   "Add Features Wizard" appears.

5. Check [SNMP Services] check box.

6. Click [Next].

7. Click [Install].

   Installing, it becomes more effective, it starts.

8. Click [Close].

Important NEC ESMPRO ServerAgentService cannot use on Windows Server 2008 Server Core or Windows Server 2008 R2 Server Core (Service Pack Non-application).

Tips In the case of Windows Server 2008 R2 Server Core (Service Pack 1) or later installation, execute the following commands by the command prompt.

"Start /w ocsetup SNMP-SC"

♦ Windows 7 / Windows 8 / Windows 8.1

1. Double-click [Programs and Features] in [Control Panel].

2. Click [Turn Windows features on or off].

3. Click [SNMP feature] check box.

4. Click [OK].

1.2.4 Settings of SNMP Service

At all except for server core installation,"♦ Setting preparation of SNMP Service" is unnecessary.
Follow the procedure of the next "♦ To change the settings of SNMP Service".

♦ Setting preparation of SNMP Service

The setting change of SNMP Service of the server that executes, Server Core installation is done from PC for Management by way of the network.

1. Connected preparation is done on the server side.

   Execute the following commands by the command prompt on the server side.

   "netsh advfirewall firewall set rule group="File and Printer Sharing" new enable=Yes"

2. Install SNMP Service on PC for Management.

   *Operation by "PC for Management" after.

   About the method of installing SNMP Service, see "1.2.3 Installing SNMP Service".

3. The session from PC for Management to the server is established.

   Execute the following commands by the command prompt on PC for Management side.

   "Net use * ¥¥ <ServerName> ¥c$ /u: <UserName>"

   Tips

   - ServerName is a name of the server that executes Server Core installation.
   - UserName is a name of Administrative account.

4. Click "Computer Management" in "Administrative Tools".

5. Right-click on the tree of the left pane, and click "Connect to another PC…"

6. The computer name of the server that executes Server Core installation is input to "Select Computer" box, and click "OK".

   Connected to "Computer Management" of the server that executes Server Core installation.

♦ To change the settings of SNMP Service

1. Double-click [Services] at [Administrative Tools] in [Control Panel].

2. Click [SNMP Service] from the service list and then [Properties] in [Action] menu.

   "SNMP Properties" dialog box appears.

Tips

- When a list of Windows service is opened when installing SNMP Service, [Traps] property sheet,[Agent] property sheet and [Security] property sheet of "SNMP Properties" dialog box are not indicated. When a property is not indicated right, close a list of Windows service and open a list of Windows service again.
- When not installing Feature Administration Tools of SNMP Service, "SNMP Properties" dialog box is not indicated right in Windows Server 2012. Add [SNMP Tool] from [Control Panel] [Programs and Features] - [Turn Windows features on or off] - [Features] - [Remote Server Administration Tools] - [Feature Administration Tools].

3. Enter "public" or an arbitrary name in [Community name] box of [Traps] property sheet and click [Add to list].

   To change the community name of traps to be received from the default "*" in NEC ESMPRO Manager side, enter the same name as the community name newly set in NEC ESMPRO Manager site.

   To receive trap from NEC ESMPRO ServerAgentService at NEC ESMPRO Manager, both community names must be the same.

4. Click [Add].

5. Click [Add...] in [Trap destinations]. After entering IP address of NEC ESMPRO Manager machine of the send destination in [Host name, IP or IPX address] box, click [Add].

   When a designated IP address (or host name) is designated by setting of Manager Alert (TCP/IP) in the trap destination, the message to warn to overlap is indicated.

   The alert overlaps by this setting, and is reported to NEC ESMPRO manager of a designated IP address (or host name).

6. Click [OK] Terminate the network setup.

1.2.5 Monitoring of RAID system

Monitoring of RAID system uses Universal RAID Utility is a monitoring utility. Refer to several manual of Universal RAID Utility.

2. Installation

Start installing after the system starts completely. If installation is conducted right after the system startup, it may fail. Wait for a while and retry if the error message appears.

2.1 Service Mode and Non-Service Mode

Installation method of NEC ESMPRO ServerAgentService has a Mode of two kinds, "Service Mode" and "Non-Service Mode".

Tips

Mode selection is performed in installation program. To use another mode of NEC ESMPRO ServerAgentService, run uninstall once and run installation.

2.1.1 Service Mode

An installation mode of default. Mode to Install all feature of NEC ESMPRO ServerAgentService.
On preinstallation or "Installation simultaneously with OS installation", Service Mode is chosen automatically.

2.1.2 Non-Service Mode

The mode without Windows service program. The monitoring service and the report engine are not installed.
To choose Non-Service Mode, run setup program from [Apptications] on EXPRESSBUILDER Autorun Menu.

2.1.3 Comparison of Service Mode and Non-Service Mode

[OS Component]

	Service Mode	Non-Service Mode	Note
.NET Framework	Indispensable	Indispensable	
SNMP Service	Indispensable	Unnecessary	

[Monitoring Function]

	Service Mode	Non-Service Mode	Note
CPU load monitoring	Installed	Installed	Not reported in case of Non-Service Mode.
File system monitoring	Installed	Installed	Not reported in case of Non-Service Mode.
Storage monitoring	Installed	Installed	Not reported in case of Non-Service Mode.

[Resident Service]

	Service Mode	Non-Service Mode	Note
Start Monitor Service	Installed	Not Install	ESMCommonService
SEL Monitoring Service	Installed	Not Install	ESM System Management Service
Communication base Service	Installed	Not Install	Alert Manager Main Service Alert Manager Socket(S) Service
Express Report Service	Possible to install	Impossible to install	Alert Manager ALIVE(S) Service
Express Report Service (HTTPS)	Possible to install	Impossible to install	

2.2 Start of a setup program

Setup program of NEC ESMPRO ServerAgentService is included in EXPRESSBUILDER.

Tips

On Server Core system, start a setup program with a procedure of "EXPRESSBUILDER Command Line Interface User's Guide".

1. Sign-in (Log on) to the system with the built-in administrator, which has administrative privileges.

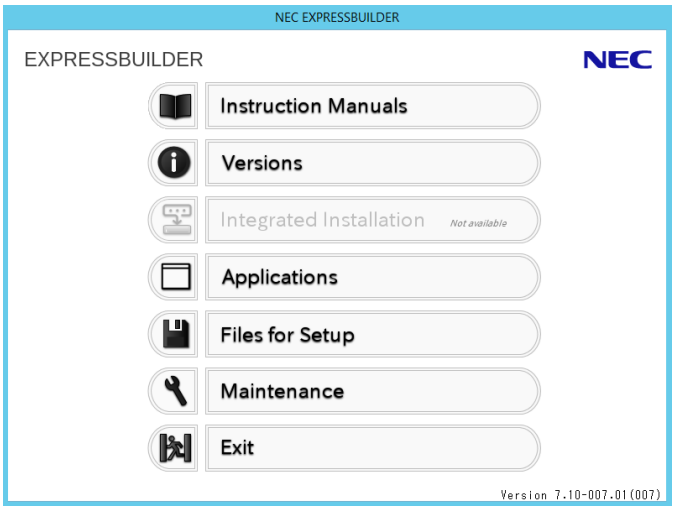
2. Insert EXPRESSBUILDER into Optical disk drive.

   EXPRESSBUILDER Autorun Menu is automatically displayed by Autorun function.

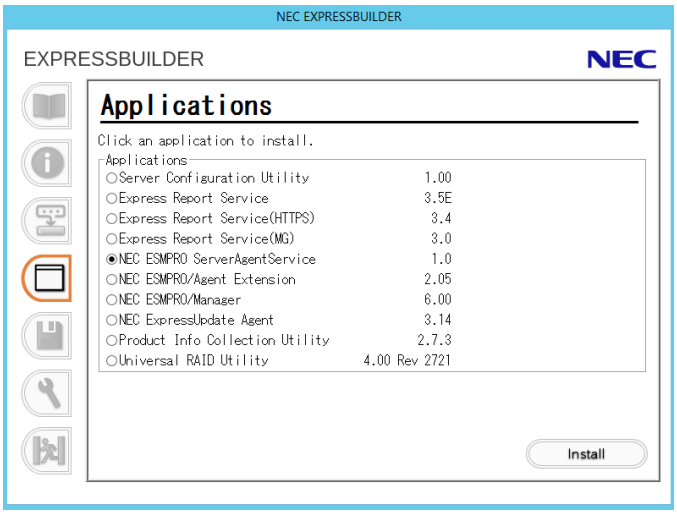
Tips

If Autorun Menu does not launch, double-click ¥autorun¥dispatcher_64.exe from EXPRESSBUILDER.
(32-bit : dispatcher.exe)

3. Click [Applications].



4. Click [NEC ESMPRO ServerAgentService] and then [Install].

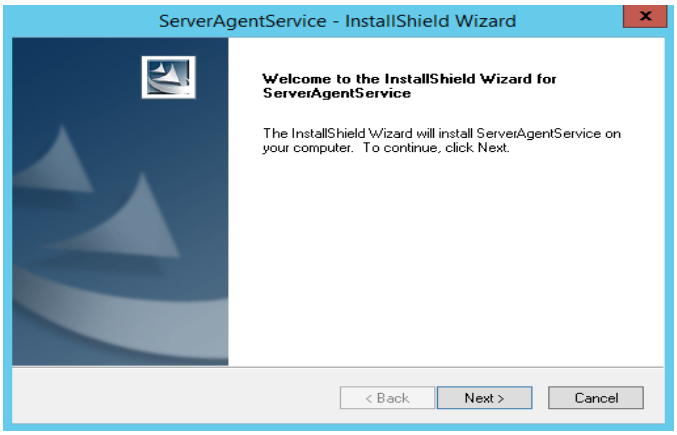


2.3 Execution of a setup program

Install with directions of a screen of a setup program.

To change a destination folder and a installation mode, choose Custom setup type on Setup Type screen.

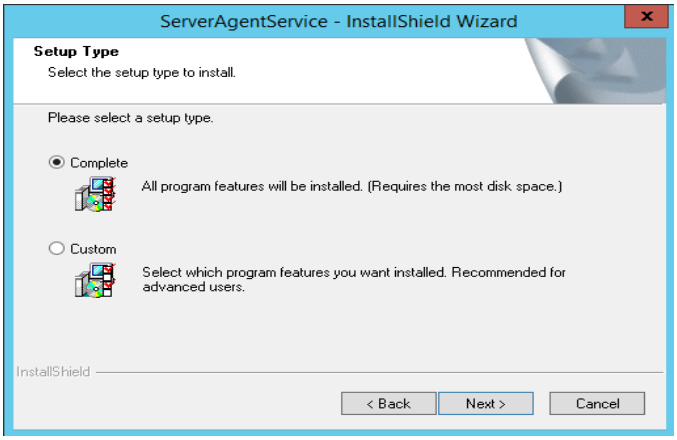
1. Click [Next].



2. Chose a setup type, and click [Next].

To install with default destination folder and installation mode, choose "Complete" setup type.

Skip to 5. To change a destination folder or a installation mode, choose "Custom" setup type.



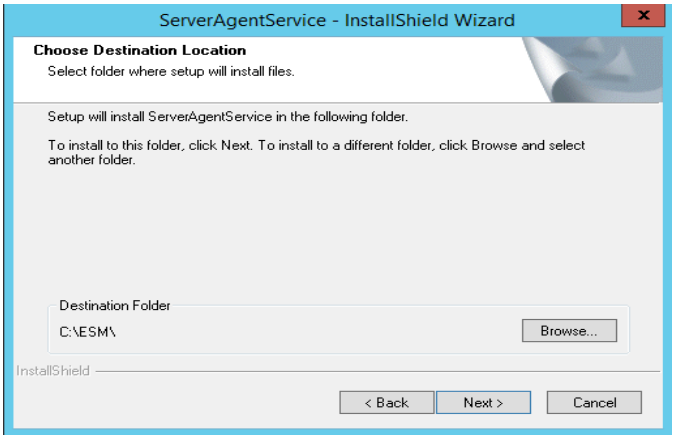
Tips

Default value of destination folder and installation mode as follows;

Destination folder : C:¥ESM

Installation mode : Service Mode

3. Choose Destination Location screen is indicated. If need, change the installation destination, and click [Next].

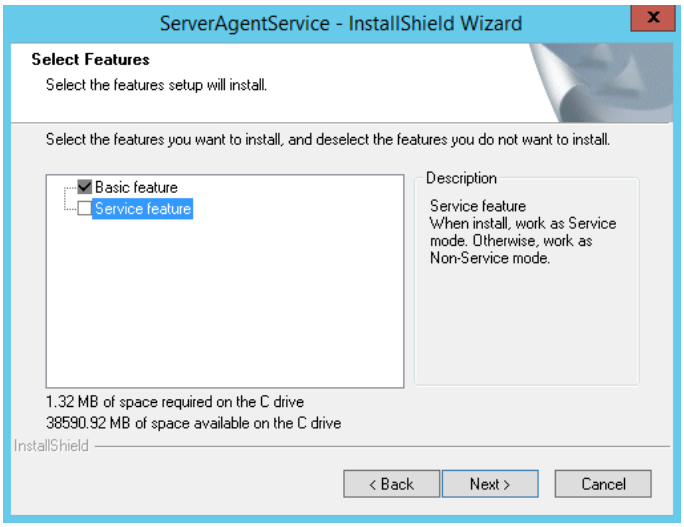


4. Select Feature screen is indicated. If need, change status of Service feature check box, and click [Next].

For Service Mode installation, put a tick on the check box.

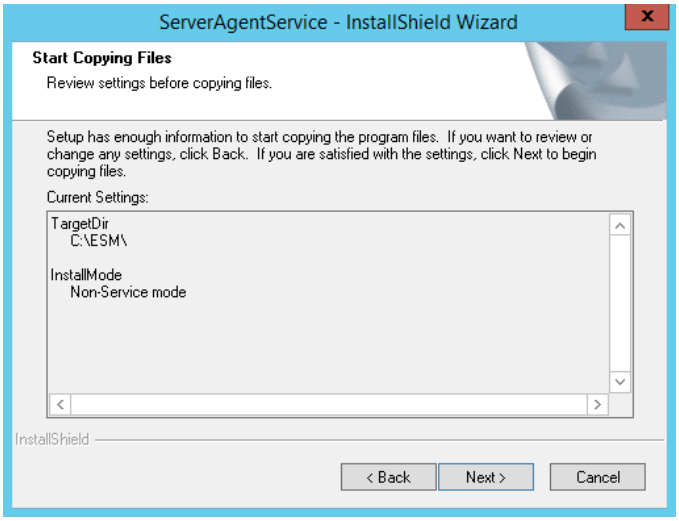
For Non-Service Mode installation, remove a check of the check box.

Tips Basic feature check box is always on because it is a indispensable feature.

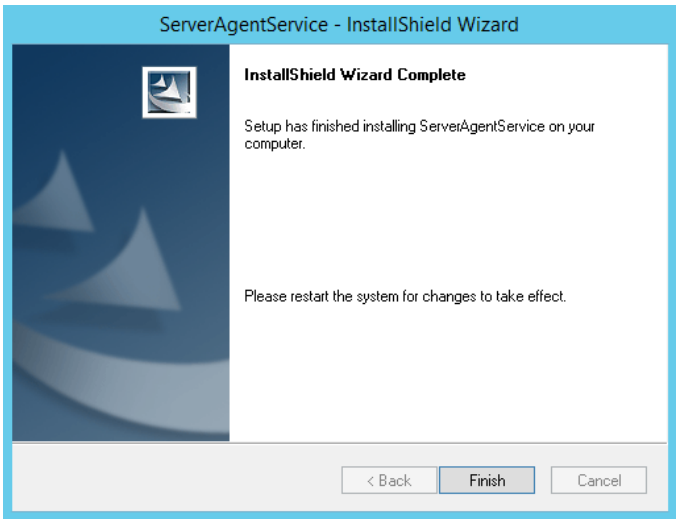


5. Click [Next].

Start of installation.



6. When the installation end window appears, click [Finish].



The installation completed.

Installed NEC ESMPRO Agent becomes enabled after a restart the system.

3. After Finishing Installation

Be sure to read this page after installing NEC ESMPRO ServerAgentService.

3.1 Operations Check

Setup program of NEC ESMPRO ServerAgentService enable Windows remote management (WinRM) and change settings. Setup program executes following WinRM commands in installation process.

```
winrm quickconfig –q
winrm set winrm/config/service @{AllowUnencrypted="true"}
winrm set winrm/config/service/auth @{Basic="true"}
```

In uninstallation process, setup program does not change these settings. If you need, change settings to use by WinRM command.

Important If you use Windows Server 2008 R2 "Pre-installation" model or you install Windows Server 2008 R2 with "Installation simultaneously with OS installation", it may fail to set Windows remote management (WinRM) settings. See "Fail registration by WS-Man with NEC ESMPRO Manager Ver. 6.00", and set manually Windows remote management (WinRM) settings.

3.2 Port Setting

A use port(5985/tcp,80/tcp) in WS-Man monitoring by NEC ESMRPO Manager is opened from after OS installation, but an accessible machine is restricted to only a machine in the local sub-net depending on installed OS or network environment. When monitoring in NEC ESMPRO Manager in the different sub-net, open WS-Man access from NEC ESMPRO Manager with the following procedure.

1. Double click [Administrative Tools]-[Windows Firewall with Advanced Security] in [Control Panel].

2. Click [Inbound Rules].

3. Select [Windows Remote Management (HTTP-In)], then Click [Properties] in the [Action] menu.

   Windows Remote Management (HTTP-In) properties" window appears.

Tips

Depending on OS, [Windows Remote Management (HTTP-In)] is divided into plural by a network profile. Select rule for your network environment.

4. Select "Any IP address" in [Remoto IP adress] box of [Scope] property sheet.

   When choosing [these IP addresses], add IP address of NEC ESMPRO Manager.

5. Click [OK].

3.3 HTTPS Setting

How to connect with NEC ESMPRO Manager using HTTPS is as the following procedure.

1. Prepare a certificate authority-signed (CA-Signed) certificate or create a Self-Signed certificate.
2. Register the certificate.
3. Check a thumbprint of the certificate.
4. Create HTTPS Listener.
5. Open a port of HTTPS.
6. Change the setting of NEC ESMPRO Manager.

Important

Using HTTPS for a connection with NEC ESMPRO Manager is recommended. Because if you used HTTP, username and the password of Basic authentication to use WS-Man communication would be flowed by plain text on the network.

♦ Prepare a certificate

When using HTTPS, A CA-Signed certificate or Self-Signed certificate is required. When you cannot prepare a CA-Signed certificate, create Self-Signed certificate.

Tips

A CA-signed certificate is recommended to use.

♦ Create Self-Signed certificate

There are two ways of creating Self-Signed certificate. One way is to use makecert.exe (Certificate Creation Tool), another way is to use keytool.exe that NEC ESMPRO Manager bundles.

The way to use "makecert.exe"

"makecert.exe" is available by installing Windows SDK, and it is possible to use it. Create Self-Signed certificate by "makecert.exe" on a server that NEC ESMPRO ServerAgentService was installed.

Log on the server by Administrator and execute a following command on Windows SDK Command Prompt.

makecert.exe -r -pe -n "CN=IP Address" -e expiranation_date -eku 1.3.6.1.5.5.7.3.1 -ss my -sr localMachine -sky exchange -sp "Microsoft RSA SChannel Cryptographic Provider" -sy 12 certificate name.cer

Example: In case of the server's IP Address is 192.168.1.1.

makecert.exe -r -pe -n "CN=192.168.1.1" -e 01/01/2020 -eku 1.3.6.1.5.5.7.3.1 -ss my -sr localMachine -sky exchange -sp "Microsoft RSA SChannel Cryptographic Provider" -sy 12 C:¥temp¥esmprosas.cer

Tips

- In case of an example, esmprosas.cer is made in C:¥temp. Make C:¥temp folder before executing makecert.exe.
- In case of to use makecert.exe, it is not necessary to register the certificate.
- Refer to the following site about makecert.exe.
  - Makecert.exe (Certificate Creation Tool)
    http://msdn.microsoft.com/en-us/library/bfsktky3(v=vs.100).aspx

The way to use NEC ESMPRO Manager

Create Self-Signed certificate on PC for management that NEC ESMPRO Manager was installed.

In case of Installing NEC ESMPRO Manager in C:¥Program Files (x86)¥ESMPRO on 64bit OS

"C:¥Program Files (x86)¥ESMPRO¥ESMWEB¥jre¥bin¥keytool" -genkey -keystore keystore -storepass storepass -validity validity -keyalg RSA -keysize keysize -storetype pkcs12 -ext EKU=serverAuth -dname “CN=IP Address"

An example: In case of the server's IP Address is 192.168.1.1..

"C:¥Program Files (x86)¥ESMPRO¥ESMWEB¥jre¥bin¥keytool" -genkey -keystore C:¥temp¥esmpro.pfx -storepass secret -validity 3650 -keyalg RSA -keysize 2048 -storetype pkcs12 -ext EKU=serverAuth -dname “CN=192.168.1.1"

Tips

- If using makecert.exe, "♦ Register the certificate" is unnecessary.
- In case of on 32bit OS, paraphrase “Program Files (x86)” as “Program Files”.

♦ Register the certificate

Register the certificate by Microsoft Management Console (MMC) on the server that NEC ESMPRO ServerAgentService was installed.

Tips

In case of the example, esmpro.pfx would be made in C:¥temp. Therefore, create C:¥temp folder before executing makecert.exe.

1. Store the certificate on the server.
2. Run mmc.exe.
3. Click [File]-[Add/Remove Snap-in].
4. Select [Certificates] and click [Add].
5. Select [Certificates snap-in]-[Computer account] and click [Next].
6. Select [Local Computer] and click [Finish].

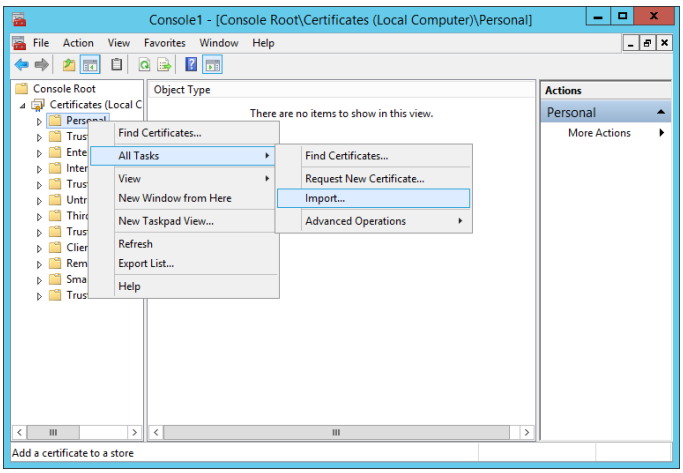
7. Click [OK].

8. Right-click [Certificates (Local Computer)]-[Personal].

Tips

In case of preparing a CA-Signed certificate, select [Certificates (Local Computer)]-[Trusted Root Certification Authorities]-[Certificates].

9. Click [All tasks]-[Import]



10. Specify the certificate along Certificate Import Wizard.

11. Input password and click [Next].

12. Select [Place all certificates in the following store] and click [Next].

13. Click [Finish].

♦ Confirm a thumbprint of the certificate

Confirm a thumbprint of the registered certificate.

In case of the certificate was registerd without using makecert.exe

Confirm a thumbprint of the registered certificate with Microsoft Management Console (MMC)

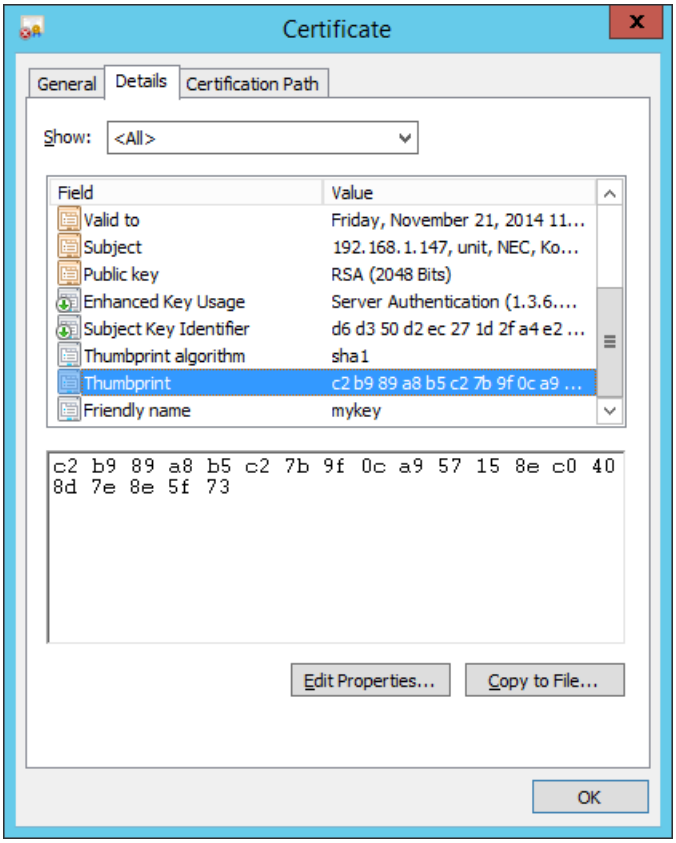
1. Select [Certificates (Local Computer)]-[Personal]-[Certificates], select the certificate that was registered by“♦ Register the certificate”.

Tips

In case of preparing a CA-Signed certificate, select [Certificates (Local Computer)]-[Trusted Root Certification Authorities]-[Certificates].

2. Double-click the certificate and select [Details].

3. Select [Thumbprint] and copy the thumbprint to the clipboard.



In case of the certificate was registerd with using "makecert.exe"

Confirm a thumbprint of the registered certificate on the server.

1. Run mmc.exe.

2. Click [File]-[Add/Remove Snap-in].

3. Select [Certificates] and click [Add].

4. In the [Certificates snap-in], select [Computer account] and click [Next].

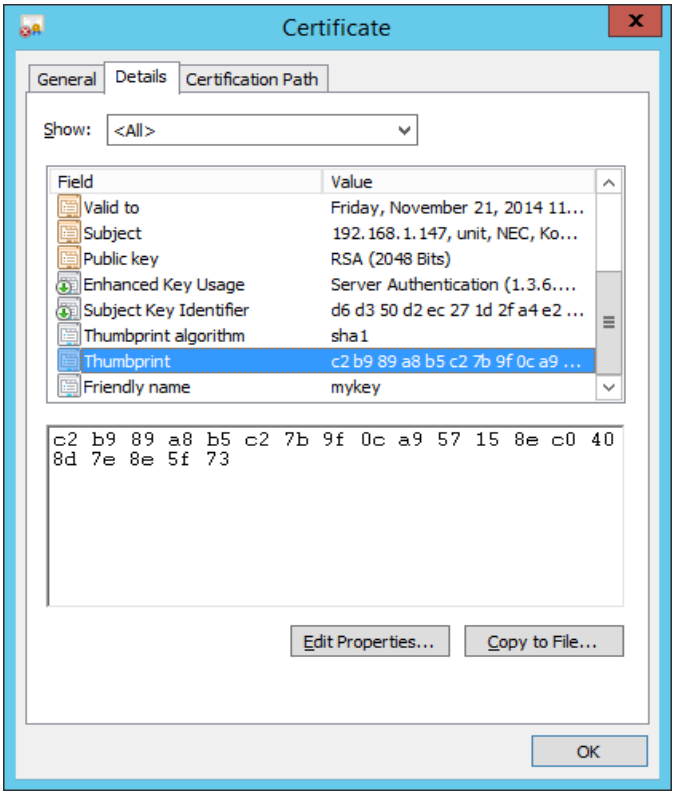
5. Select [Local Computer] and click [Finish].

6. Click [Close] and click [OK].

7. Select [Certificates (Local Computer)]-[Personal]-[Certificates], select the certificate that was registered by“♦ Create a Self-Signed certificate”.

8. Double-click the certificate and select [Details].

9. Select [Thumbprint] and copy the thumbprint to the clipboard.



♦ Create HTTPS Listener

Create HTTPS Listener to connect HTTPS by WS-Man on the server that NEC ESMPRO ServerAgentService was installed.

1. Execute the following command using the thumbprint that was confirmed by "♦ Confirm a thumbprint of the certificate"

winrm create winrm/config/Listener?Address=*+Transport=HTTPS @{Hostname="IP Address";CertificateThumbprint="confirmed thumbprint"}

Example: In case of IP Address is 192.168.1.1 on the server

winrm create winrm/config/Listener?Address=*+Transport=HTTPS @{Hostname="192.168.1.1";CertificateThumbprint="30 ab a3 7a 87 1e 5c ea aa 3d 83 74 d0 ba 19 46 6f 6c 37 ab"}

If you succeed in executing the command, the following string are displayed on Command Prompt.ResourceCreated

Address = http://schemas.xmlsoap.org/ws/2004/08/addressing/role/anonymous
ReferenceParameters
ResourceURI = http://schemas.microsoft.com/wbem/wsman/1/config/listener
SelectorSet
Selector: Address = *, Transport = HTTPS

Tips When not using HTTP Listener by setting HTTPS Listener, execute the following command to disable the communication which isn't encoded.

♦ Open a port

Open a port to use HTTPS connection.

1. Double click [Administrative Tools]-[Windows Firewall with Advanced Security] in [Control Panel].

2. Right-click [Inbound Rules] and click [New Rule].

3. Select [Port] and click [Next].

4. Select [TCP] and [Specific local ports], input 5986 in port number and click [Next].

Tips

When the server OS is Windows Server 2008, the port of HTTPS is 443. When from Windows Server 2008 R2 onward, it is 5986.

5. Select [Allow the connection] and click [Next].

6. Select a profile that is used for a connection with NEC ESMPRO Manager from [Domain], [Private] or [Public].

7. Input [Name] and [Description] and click [Finish].

Eample:

Name: NEC ESMPRO ServerAgentService (HTTPS)

Description: Inbound rule for NEC ESMPRO ServerAgentService to allow data transfer using HTTPS [TCP 5986]

♦ NEC ESMPRO Manager Setting

If using Self-Signed certificate, change a setting of NEC ESMPRO Manager to allow Self-Signed certificate by WS-Man communication.

If using a CA-Signed certificate, the following procedure is unnecessary.

1. Login NEC ESMPRO Manager.

2. Select [Environment].

3. Select [Network] tab and click [Edit].

4. Select [WS-Man Communication]-[Self Signed Certificate]-[Allow] and click [Apply].

3.4 Operations Check

Confirm whether the setting of NEC ESMPRO ServerAgentService.

1. Execute the following command on another server to set WinRM on Command Prompt.

```
winrm quickconfig
winrm set winrm/config/Client @{AllowUnencrypted="true"}
winrm set winrm/config/Client/Auth @{Basic="true"}
winrm set winrm/config/Client @{TrustedHost="IPAddress"}
```

2. Execute the following command to confirm.

```
winrm identify -r:http://IPAddress:port -u:username -p:password
winrm e wmi/root/cimv2/Win32_ComputerSystemProduct -r:http://IPAddress:port
-u:username -p:password
winrm e wmi/root/ESMPRO/AS/ESM_GeneralInformation -r:http://IPAddress:port
-u:username -p:password
```

Tips

- When connecting HTTPS, designate HTTPS as "-r" instead of HTTP.
- When an OS on the server is Windows Server 2008, the port is HTTP/80 or HTTPS/443. When from Windows Server 2008 R2 onward, it's HTTP/5985 or HTTPS/5986.
- Input username and password of OS' logon account.
- When connecting a server that have been set HTTPS connection by Self-Signed certificate, add "skipCACheck" to the command as follows. WinRM identify -r:http://IPAddress:port -u:username -p:password -skipCACheck.

NEC ESMPRO ServerAgentService Ver. 1.0

3 Uninstallation

This chapter explains uninstallation of NEC ESMPRO ServerAgentService.

1. Before Starting Uninstallation

Describes about necessary setting before NEC ESMPRO ServerAgentService uninstallation.

2. Uninstallation

Describes about uninstallation procedure of NEC ESMPRO ServerAgentService.

1. Before Starting Uninstallation

Be sure to read this page before uninstalling NEC ESMPRO ServerAgentService.

1.1 Confirmation of .NET Framework

Installation of .NET Framework 4, .NET Framework 4.5 or later are indispensable to uninstallation of NEC ESMPRO ServerAgentService. If uninstall .NET Framework 4 after installation of NEC ESMPRO ServerAgentService, install .NET Framework 4 again.

1.2 Confirmation of Express Report Service / Express Report Service (HTTPS)

When Express Report Service / Express Report Service (HTTPS) are installed, Express Report Service / Express Report Service (HTTPS) must be uninstalled prior to uninstalling of NEC ESMPRO ServerAgentService.

2. Uninstallation

Start uninstalling after the system starts completely.

If uninstallation is conducted right after system startup, it may fail. Wait for a while and retry if error message appears.

The uninstallation procedure of NEC ESMPRO ServerAgentService is common to Service Mode and Non-Service Mode.

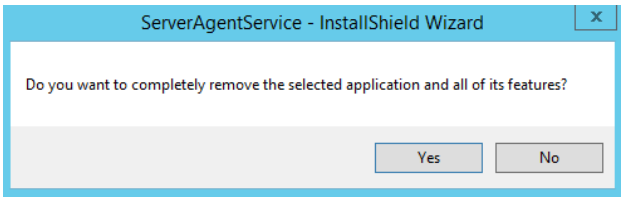
2.1 On full install OS

1. Click [Programs and Features] or [Add or Remove Programs] from [Control Panel].

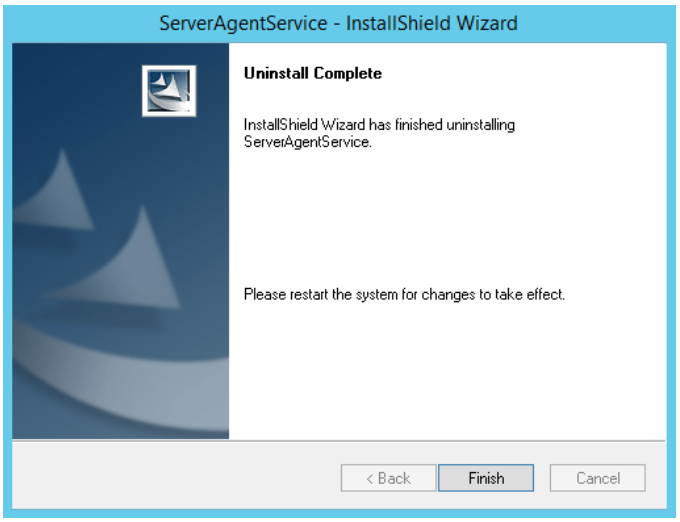
2. Select [NEC ESMPRO Agent] and click [Uninstall/Change] (or [Change/Remove]).

3. The window which confirms the execution of remove is indicated, click [Yes].

   Uninstallation is start.



4. When the uninstallation end window appears, click [Finish].



The uninstallation completed.

Restart the system is required.

Tips

- If uninstallation is conducted right after the system startup, it can fail. Wait for a while and retry if the error message appears.[AMIRTUpt.dll] file can remain solely in the installation folder. In this case, delete it manually. If files other than [AMIRTUpt.dll] also remain, do not delete them.
- Due to InstallShield failure, the error message "C:¥PROGRA~1¥INSTAL~1¥{6342F~1¥setup.exe" is indicated only at the first startup after uninstallation.
- Depending on OS uninstalling NEC ESMPRO ServerAgentService the message that "Windows Explorer has stopped working" might be displayed. However, uninstallation was normally completed. The system does not have the influence.

2.2 On Server Core install OS

A setup program is started from EXPRESSBUILDER by Server Core installation.

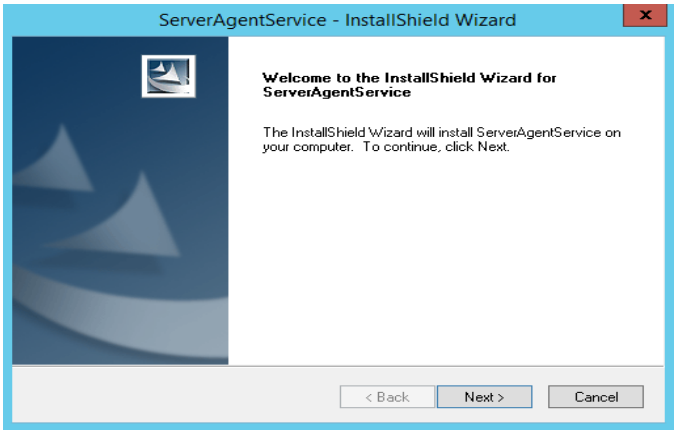
1. Sign-in (Log on) to the system with the built-in administrator, which has administrative privileges.

2. Insert EXPRESSBUILDER into Optical disk drive.

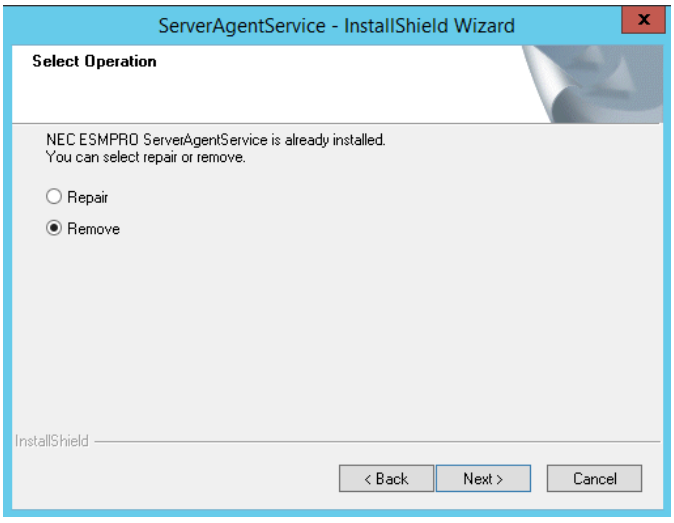
   EXPRESSBUILDER Autorun Menu is automatically displayed by Autorun function.

3. A setup program of NEC ESMPRO ServerAgentService is started with a procedure of "EXPRESSBUILDER Command Line Interface User's Guide".

4. Click [Next].

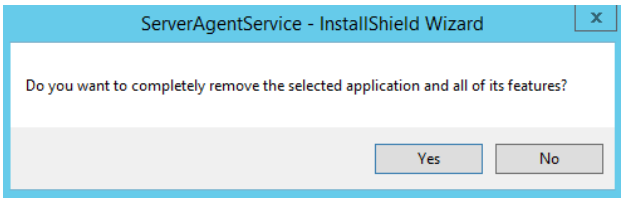


5. Chose a [Remove], and click [Next].

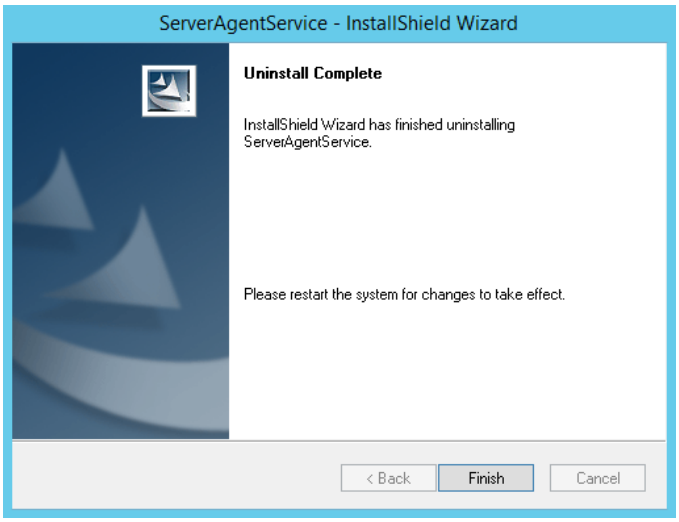


6. The window which confirms the execution of remove is indicated, click [Yes].

   Uninstallation is start.



7. When the uninstallation end window appears, click [Finish].



The uninstallation completed.

Restart the system is required.

Tips

- If uninstallation is conducted right after the system startup, it can fail. Wait for a while and retry if the error message appears.[AMIRTUpt.dll] file can remain solely in the installation folder. In this case, delete it manually. If files other than [AMIRTUpt.dll] also remain, do not delete them.
- Due to InstallShield failure, the error message "C:¥PROGRA~1¥INSTAL~1¥**{6342F~1¥setup.exe" is indicated only at the first startup after uninstallation.**
- Depending on OS uninstalling NEC ESMPRO ServerAgentService the message that "Windows Explorer has stopped working" might be displayed. However, uninstallation was normally completed. The system does not have the influence.

NEC ESMPRO ServerAgentService Ver. 1.0

4 Appendix

1. Note

Describes about note when using NEC ESMPRO ServerAgentService.

2. Port number list

Describes about the port NEC ESMPRO ServerAgentService uses.

3. Services list

Describes about the service list NEC ESMPRO ServerAgentService uses.

4. The order of start / stop of services

Describes about the start order and stop order of the service NEC ESMPRO ServerAgentService uses.

I. Notes

I.I Event log

♦ Event log which is registered during the installation of .Net Framework (Application)

During the installation of .Net Framework, the following event log is registered. However, there are no problems to using a system.

Source	:	ASP.NET 4.0.30319.0
Event ID	:	1020
Level	:	Warning
Description	:	Updates to the IIS metabase were aborted because IIS is either not installed or is disabled on this machine. To configure ASP.NET to run in IIS, please install or enable IIS and re-register ASP.NET using aspnet_regiis.exe /i.

♦ Event log which is registered during the hang-up of Alert Manager WMI Service service Start failure of ESMCommonService (System)

The following log may be registered on the eventlog by the situation of the system - for example, you installed NEC ESMPRO Manager and NEC ESMPRO ServerAgentService on the same machine.

Source	:	Service Control Manager
Event ID	:	7022
Level	:	Error
Description	:	Alert Manager WMI Service hang-up

You do not have any problem if it shift to a start state (running), but, ESMCommonService of NEC ESMPRO ServerAgentService may not start properly then. It is set to solve the phenomenon. Setting method is described below.

1. Double-click [Services] at [Administrative Tools] in [Control Panel].
2. Click [ESMCommonService] from the service list and then [Properties] in [Action] menu.
3. Set "Automatic (Delayed Start)" to Startup type of [General] property sheet.
4. Set "Restart the Service" to [First failure] and [Second failure] of [Recovery] property sheet.
5. Click [OK].

By the setting mentioned above, NEC ESMPRO ServerAgentService starts after system operation after progress for 2 minutes.

♦ Event log which is registered when connecting NEC ESMPRO Manager by HTTP connection (System)

When connecting NEC ESMPRO Manager by HTTP connection, the following event log is registered.

Source	:	Microsoft-Windows-WinRM
Event ID	:	10120
Level	:	Warning
Description	:	The WinRM service has received an unsecure HTTP connection from 192.168.1.1. This is not a secure configuration. User Action Set AllowUnencrypted to False in WinRM configuration to ensure packets are encrypted on the wire.

When this event log is registered, there are no problems using a system. However, the system is not secure. If you construct a secure system, configure HTTPS connection with 3.2 HTTPS Setting in Chapter 2. Then, this event log is not registered.

♦ Event log which is registered during the installation (Application)

During the installation of NEC ESMPRO ServerAgentService, the following event log is registered. However, there are no problems to using a system.

Source	:	WMI
Event ID	:	63
Level	:	Warning
Description	:	A provider, ESMCpu, Version=1.0.0.0, Culture=neutral, PublicKeyToken=9223c336e3c53daa, has been registered in the Windows Management Instrumentation namespace root¥ESMPRO¥AS to use the LocalSystem account. This account is privileged and the provider may cause a security violation if it does not correctly impersonate user requests.
Description	:	A provider, esmfs, Version=1.1.0.0, Culture=neutral, PublicKeyToken=f065d8e2e775be08, has been registered in the Windows Management Instrumentation namespace root¥ESMPRO¥AS to use the LocalSystem account. This account is privileged and the provider may cause a security violation if it does not correctly impersonate user requests.
Description	:	A provider, esmstrg, Version=1.1.0.0, Culture=neutral, PublicKeyToken=bf878da6f0186331, has been registered in the Windows Management Instrumentation namespace root¥ESMPRO¥AS to use the LocalSystem account. This account is privileged and the provider may cause a security violation if it does not correctly impersonate user requests.

When WMI provider which runs under Local System account is registered, these events occur. Some of WMI providers included in NEC ESMPRO ServerAgentService run under Local System account. Therefore, these events are registered.

♦ Event log which is registered when doing shut down (system)

When you shut down the machine in which NEC ESMPRO ServerAgentService was installed, the following event log is registered.

Source	:	Windows Remote Manager
Event ID	:	10149
Level	:	Warning
Description	:	The WinRM service is not listening for WS-Management requests.

If you did not intentionally stop the service, use the following command to see the WinRM configuration:

```
winrm enumerate winrm/config/listener
```

When the WS-Management listener stopped, this event is registered. Windows Remote Manager service is stopped at shutdown, so this event is registered. Thus, there are no problems to using a system.

♦ Monitors hardware log (SEL)

Monitors hardware log (SEL) by NEC ESMPRO ServerAgentService uses Windows Management Instrumentation (WMI) Service. Therefore when WMI Service stopped or restarted, NEC ESMPRO ServerAgentService cannot monitor any more.

When WMI Service stopped or restarted, the following event is registered with event log (Application).

Source	:	Application Error
Event ID	:	1000
Level	:	Error
Description	:	Faulting application name: svchost.exe

When WMI Service stopped or restarted, restart the system. Or restart of ESM System Management Service from Control Panel, then Administrative Tools, then Services.
(NEC ESMPRO ServerAgentService reconnects to WMI Service by restarting ESM System Management Service)

♦ Report monitoring event

- The alert function is based on the event information registered in the event log of the system.
  Thus, set the event log process on the event viewer to [Overwrite events as needed]. The monitoring event is not alerted in the setting other than that.

- The event registered in the monitoring event tree on the setting tool of alert function (Alert Manager) is not alerted to the manager if Alert Manager Main Service does not operate. Even when the service is operating, if the enabled/disabled flag of each alerting ways is disabled, the event is not alerted.
  The alert enabled/disabled flag is set by selecting [Base Setting] - [Report] Properties from [Setting] of Alert Manager. Also the event occurred before Event log Service started at the time of system startup cannot be alerted.

- You can set the time to the shutdown by selecting [Base Setting] - [Other] on the setting tool of the alert function (Alert Manager). The initial value is 20 seconds.
  When you set smaller value than this, the alert cannot be performed at the time of shutdown.

- When an alert failure occurs at the time of alerting of monitoring target event, an error message is logged in the event log. If newly log the error message which occurs at the time of alerting as a monitoring target event, the error at the time of alerting will be alerted again.
  As a result, large number of alerts will be sent when recovering the failure. This leads to the increase of system load and the degradation of the performance. Do not register the events especially which are produced by the following alert function services as the monitoring target.
    - Alert Manager Main Service
    - Alert Manager Socket(S) Service
    - (Alert Manager ALIVE(S) Service)*

      (*) Alert Manager ALIVE(S) Service is the service registered only when Express Report Service or NEC ESMPRO Manager is installed.

- On Manager Alert (SNMP) in alert report function, the length of messages should be up to 511 bytes.
  When reporting a message with the length longer than 512 bytes, the 512th and the later message do not appear on the alert viewer. Check the 512th and the later message on the event viewer on the machine that sends the report.
  If you want to display all the messages later than the 512th, use Manager Alert (TCP/IP In-Band).

1.2 Hard disk drive / RAID system / File system

♦ Monitoring of RAID system

Monitoring of RAID system uses Universal RAID Utility is a monitoring utility. Refer to several manual of Universal RAID Utility.

♦ SATA Optical disk drive

In the case of using LSI Embedded MegaRAID, infomation of SATA Optical disk drive does not displayed of [Information of server state/constitution] of NEC ESMPRO Manager.

♦ Information displayed in "Resource" of SCSI controller

Incorrect information appear in the [Resource] window displayed from [SCSI Controller] of [Information of server state/constitution] of NEC ESMPRO Manager.

Check the information of resource using "Device Manager" and "System Information (winmsd.exe)" of OS.

♦ Storage Devices other than SCSI/IDE Device

NEC ESMPRO ServerAgentService does not monitor storage devices other than SCSI/IDE devices (e.g., USB device).

♦ Configuration changes to the file system monitoring and storage monitoring

Set by NEC ESMPRO Manager monitoring interval, hard disk drive pre-failure prediction monitoring enable/disable, file system free space threshold monitoring does not take effect immediately if you change. Setting configuration changes after you have changed in the next monitoring interval of monitoring function of each is enabled.

♦ Monitoring the failures of the tape device is desired

NEC ESMPRO ServerAgentService does not monitor the failures of the tape device. If want to conduct monitoring, use backup software or tape monitoring application. Using the event monitoring function of NEC ESMPRO ServerAgentService allows you to monitor the event log of backup software or applications.

♦ Network drive is not displayed of [Information of server state/constitution] of NEC ESMPRO Manager

The drive connected to network is not displayed under the file system tree in [Information of server state/constitution] of NEC ESMPRO Manager.

♦ Changing mode of Hard disk drive pre-failure prediction

Turning on/off the mode of hard disk drive pre-failure prediction, all hard disk drives work in the same mode in either case. Cannot set the mode of each hard disk drive individually.

♦ File system information of media insertion

When you insert media such as a DVD or a floppy disk, NEC ESMPRO Manager as the file system information of [Information server state/constitution] to display information such as volume label and capacity information. So "GB" the smallest unit of information capacity, there is a case to display, "0.0GB" capacity of the media such as a floppy disk capacity is small.

♦ File system free-space monitoring of capacity less than 100MB

In NEC ESMPRO ServerAgentService, capacity does not support free-space monitoring of the file system of less than 100MB. Free space monitoring configuration of such a file system, is "disabled (not monitor)" and from the beginig.

1.3 I/O device

♦ Serial Port

For the models supporting serial ports, note the following. NEC ESMPRO ServerAgentService has multiple features that use serial ports. When using these features, the ports can become insufficient. The serial ports available for each feature are as follows.

- UPS : COM1-10
- APCU : COM1-2
- (ALIVE Maintenance)* : COM1-9

(*) Alive Maintenance uses Remote Access Service.

The available serial ports when using Remote Access Service for Manager Report (TCP/IP Out-of-Band) are as follows.

- Manager Report: COM1-10

Among those above, only the following combination can share the serial ports.

- Alive Maintenance + Remote Access Service used by a user

When one of the features uses the line, the other feature cannot be used.

Tips

Manager Report (TCP /IP Out-of-Band), which uses Remote Access Service, can be unable to notify failure information when sharing other serial port. Ensure not to share serial ports.

1.4 Coexistence with another product

♦ FIle Sysytem monitoring cannot be inherited on the system using EXPRESSCLUSTER

If a failover occurs, the settings of the threshold for the empty space monitoring function and the enable/disable of monitoring of the operating sever are not inherited to the standby server. Make sure to reset the threshold and the enable / disable of monitoring on the standby server.

♦ Using with Oracle Products

When Oracle product is installed, the startup of SNMP Service can be changed to "Manual". In such a case, restore it to "Automatic" and configure the appropriate settings according to the instructions of Oracle product.

1.5 Report

♦ Detail information of alert

Detail information of some alert displayed on the alert viewer can be shown as "Unknown".

♦ General client report

"General client report" cannot be used.

Though no error appears even if you enable this method, it does not work.

♦ Display of Report Settings

When installed on the same machine NEC ESMPRO Manager and NEC ESMPRO ServerAgentService, [Report Settings] will be displayed only to the [Start] menu on NEC ESMPRO Manager.

1.6 OS dependence

♦ Notes on Server Core Insallation

- "Manager (TCP/IP Out-of-Band)" method cannot be used.

♦ Applying Service Pack 1 to Windows 7 (x64) / Windows Server 2008 R2

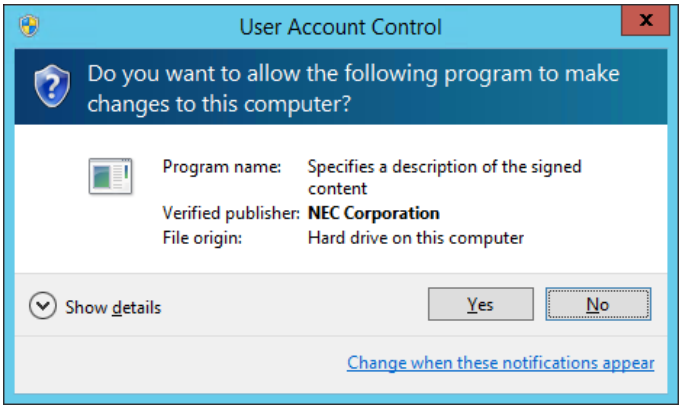
When you apply Windows 7 (Service Pack 1) / Windows Server 2008 R2 (Service Pack 1) to an environment where NEC ESMPRO ServerAgentService is installed, apply update program (KB2487426) first. If KB2487426 has not been applied before installing Service Pack 1, application error of NEC ESMPRO ServerAgentService is registered to event log at the time of restart the system after update program applied. However, NEC ESMPRO ServerAgentService normally works after a restart, and there are no problems.

The detailed information is described on Microsoft Product Support Services.
Go to Microsoft website:

http://support.microsoft.com/kb/2487426/en-us

♦ User Account Control

User Account Control is turned on, if you start NEC ESMPRO ServerAgentService Control Panel or collect.exe program, [User Account Control] dialog box will appear. Click [Continue] to start the program.



♦ Notes on host OS of Virtualization environment

When NEC ESMPRO ServerAgentService detects dangerous trouble information continuous to operate, OS is shutdown in the setting of default. (If it is installed as Non-Service Mode, OS is not made shutdown)

The shutdown not anticipated from Guest OS was generated because the service console shutdown without shutting down Guest OS in the environment to operate Guest OS in the virtualization environment.

Invalidate the shutdown function by the report from NEC ESMPRO ServerAgentService, and shutdown from Guest OS by manual at the failure when the normal termination of Guest OS is valued.

[Setup steps of shutdown function by report]

1. Sign-in (Log on) to the system with the built-in administrator, which has administrative privileges.

2. Click [Report Settings] in start menu.
   Displays Alert Manager.

3. Click [Setting]-[Base Setting].

4. Confirms "Shutdown Delay" item of [Other] is the invalid (red).
   When being valid (green), click an icon and change it to invalid (red).

5. Click [OK] Setting Terminate.

1.7 Others

♦ Fail registration by WS-Man with NEC ESMPRO Manager Ver. 6.00

If registration by WS-Man of NEC ESMPRO Manager Ver. 6.00 is fail, confirm Windows remote management (WinRM) settings.

Important If you use Windows Server 2008 R2 "Pre-installation" model or you install Windows Server 2008 R2 with "Installation simultaneously with OS installation", it may fail to set Windows remote management (WinRM) settings. If you use the above environment, be sure to confirm this notice.

1. On Command Prompt from [Start] menu, click the right button and select "Run as administrator".

2. On command prompt, input following command and press Enter key.

   winrm quickconfig -q

3. On command prompt, input following command and press Enter key.

   winrm get winrm/config/service

4. Confirm the following value is "true" or not.

   - Basic value under auth

5. If value to confirm is "false", on command prompt, input following command and press Enter key.

   winrm set winrm/config/service @{AllowUnencrypted="true"}

6. On command prompt, input following command and press Enter key.

   winrm get winrm/config/service

7. Confirm the following value.

   - AllowUnencrypted

8. By which to use HTTP or HTTPS to connect with NEC ESMPRO Manager, run the following WinRM command to use NEC ESMPRO ServerAgentService.

If you use HTTP to connect with NEC ESMPRO Manager;

winrm set winrm/config/service @{AllowUnencrypted="true"}

If you use HTTPS to connect with NEC ESMPRO Manager;

See "Chapter2 3.3 HTTPS Setting"

winrm set winrm/config/service @{AllowUnencrypted="false"}

♦ Monitoring component's hardware from NEC ESMPRO Manager

Registering BMC (EXPRESSSCOPE Engine) to NEC ESMPRO Manager and setting up SNMP Alert configuration are required to monitor component's hardware error.

♦ Restart after Hardware trouble occurs

When abnormality of Hardware is detected, OS is shutdown.

When OS is restarted without action/recovering trouble after shutdown, shutdown is done just after the restart.

♦ Memory leak (Windows Server 2008)

Memory leak occurs intermittently irregularly on Windows Server 2008.

The detailed information is described on Microsoft Product Support Services.

Check the contents.

[Article ID: 955515]

http://support.microsoft.com/kb/955515/en-us

Execute the above hotfix or Service Pack 2.

NEC recommends Service Pack 2.

♦ Memory leak (Windows Server 2012)

Svchost.exe including WMI service leaks a memory in Windows Server 2012.

The detailed information is described on Microsoft Product Support Services.

Check the contents.

[Article ID: 2793908]

http://support.microsoft.com/kb/2793908/en-us

Execute the above hotfix.

♦ When Performing Duplex System Management

To perform duplex system management by using EXPRESSCLUSTER, install NEC ESMPRO ServerAgentService on a local disk on both the operating and standby servers. The installation procedure for NEC ESMPRO ServerAgentService is same as a normal installation, except that install on two servers.

2. Port number list

NEC ESMPRO ServerAgentService uses the following port numbers.

To use NEC ESMPRO ServerAgentService with Windows Firewall enabled, open the required ports.

[NEC ESMPRO Manager <-> NEC ESMPRO ServerAgentService]

Function	NEC ESMPRO Manager	Direction	NEC ESMPRO ServerAgentService	Remarks
Auto Registration Server Monitoring (WS-MAN/HTTP)	Auto-assignment	-> <-	5985/tcp (80/tcp)*	HTTP
Auto Registration Server Monitoring (WS-MAN/HTTPS)	Auto-assignment	-> <-	5986/tcp (443/tcp)*	HTTPS
SNMP report to Manager	162/udp	<-	Auto-assignment	snmp-trap
TCP/IP report to Manager	31134/tcp	<-<br->	Auto-assignment	
CIM-Indication report to Manager	6736/tcp (configurable)	<-	Auto-assignment	

(*) If you installed NEC ESMPRO ServerAgentService on Windows Server 2008, port HTTP/80 and HTTPS/443 are used.

[NEC ESMPRO ServerAgentService <-> Mail Server]

Function	NEC ESMPRO ServerAgentService	Direction	Main Server	Remarks
Express Report Service (Internet Mail)	Auto-assignment	-> <-	25/tcp	SMTP
		<-<br->	110/tcp	(POP3)*

(*) Only when "POP before SMTP" is used.

- In case of two-way protocol, upper arrow shows that connection starts, and lower arrow shows that connection turns.
- The port number used by TCP/IP report to Manager or Express Report Service can be changed in set screen of report.
- In case of port number unknown, unused port is used to start connection.

3. Services list

NEC ESMPRO ServerAgentService uses the following services.

Services	Process name	Start-up	Function	Remarks
Alert Manager Main Service	AMVMain.exe	Automatic	Manage Various trouble reports.	
Alert Manager Socket(S) Service	amvscks.exe	Manual	Report to Manager by using TCP/IP.	When either of "Manager(TCP/IP In-Band) and Manager(TCP/IP Out-of-Band)" is set to valid (green) at Base Setting Window, the service is started. When both settings are set to invalid (red), the service is stop.
ESMCommonService	ESMCommon.exe	Automatic	Enable NEC ESMPRO monitering function.	
ESM System Management Service	esmsmsrv.exe	Automatic	Monitors hardware log (SEL)	Only IPMI corresponding model.

4. The order of stop and start of services

To stop or start services, perform the following procedure.

On some model of server, some service cannot exist.

Non-Service Mode does not register service.

[order]	[Stopping services]	[Starting services]
1.	ESMCommonService	ESMCommonService
2.	ESM System Management Service	ESM System Management Service
3.	(Alert Manager ALIVE(S) Service)*	SNMP Service
4.	Alert Manager Main Service	(Alert Manager ALIVE(S) Service)*
5.	Alert Manager Socket(S) Service	Alert Manager Main Service
6.	SNMP Service	Alert Manager Socket(S) Service

(*) Alert Manager ALIVE(S) Service is the service registered only when Express Report Service or NEC ESMPRO Manager is installed.

NEC Express Server

NEC ESMPRO ServerAgentService Ver. 1.0
Installation Guide (Windows)

NEC Corporation
7-1 Shiba 5-Chome, Minato-Ku
Tokyo 108-8001, Japan

©NEC Corporation 2014
The contents of this manual may not be copied or altered without the prior written permission of NEC Corporation.